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ABSTRACT

This document is the final performance report for a Field Initiated Studies (FIS) project that addressed the need for a better assessment of public library services for adult lifelong learning in majority-minority and lower income library market areas. After stating the major educational problem addressed by the FIS project, the report lists the goals and objectives that were met, along with a discussion on any modifications or shortcomings relative to the stated goals and objectives. The report provides detailed responses to the following objectives: (1) State the major educational problem that the FIS project addressed; (2) Describe the goals and objectives of the project and the extent to which they have been accomplished; (3) Describe the issues and findings emerging from the current work; (4) Describe the major accomplishments of the FIS project since its inception; (5) Write one or two vignettes that highlight important results of the FIS project in a one-paragraph, story-telling manner; and (6) Include an annotated bibliography of key products developed under the grant and where they may be obtained. Recommendations are then provided for the nine issues/findings that were identified by the research as relative to the use of public libraries as adult lifelong learning centers serving primarily minority and low income populations. Major accomplishments of this FIS project are outlined, followed by vignettes that highlight important results of the project. A final section addresses the availability of the key products developed under the grant. (AEF)

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Final Performance Report

Market -Based Adult Lifelong Learning Performance Measures
for Public Libraries Serving Lower Income and Majority-Minority Markets
September 1, 1996 - August 31, 1999

U.S. Department of Education
Office of Educational Research and Improvement
National Institute on Postsecondary Education
Libraries and Lifelong Learning

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1. State the major educational problem that your FIS project addressed.

Adult lifelong learning is widely recognized as a legitimate educational need, whether formal or informal. Public libraries are one of the most important resources for adult lifelong learning. For over 100 years, public libraries across the country are professionally self-mandated to provide equal access to humankind's range of educational and informational materials, based upon an analysis of the immediate population's unique needs. While 10 percent of American's 16,000 public library outlets serve populations of 50,000 or more, nearly half serve fewer than 5000. The public library facilities in the rural and small densely populated urban neighborhoods are often the only facility truly open to the public, in place and located within the travel distance of the vulnerable elements of society such as the poor, children, elderly, and other disadvantaged. The value of these library facilities with trained personnel as the most effective conduit for adult lifelong learning cannot be underestimated.

As communities across America change from majority-white markets to majority-minority (where the majority of the residents belong to a designated minority population such as Asian Pacific, Hispanic, or Black) or multi-culturally diverse markets, serving all the different groups using a single program or methodology is not usually effective. Public libraries are also one of the most important resources for adult lifelong learning in areas having a high concentration of low-income individuals because those individuals have fewer options for education and less access to information resources. Such areas are often coincidental with minority populations. The growth of poverty and joblessness in the U.S. also increases the significance of the public library's role in adult lifelong learning. Different groups have different socio-economic profiles and educational needs. The public library is vital in diminishing the information gap between the technical elite and the technical poor. While a few studies have been done on serving such diverse users in public libraries, systematic nationwide studies are lacking.

The research that is available indicates that public library services needed in majority-minority and low-income areas differ from traditional library markets. Koontz (1993) found that minorities used reference services and attended library programs more than they checked out books. This is important because book circulation is long the library field's largest, tried, and true measure of library use. Thus, library user populations that use the library for lifelong education in ways that do not involve checking out books may cause their facility to be underfunded or even closed relative to libraries with higher book circulation!

It is critical to establish new performance measures and use counts for public libraries that include the usage of public libraries as focal points for adult lifelong learning in many communities across America. Due to budgetary constraints, many

public library systems today are merging, re-siting, or closing public library branches. Such actions are being performed with little or no study on the possible effects on majority-minority and/or low income library users. Indeed, available evidence indicates that such actions disproportionately reduce access to information resources and adult lifelong learning opportunities for such groups.

The major educational problem this FIS project addresses then is the need for a better assessment of library uses besides checking out books in a nationwide sample of majority-minority and lower income library market areas. The project provided a first nationwide snapshot of library use in markets subsumed by various immigrant groups, those left by 'white-flight,' or those serving users one on one on projects such as resume writing and school projects. The refinement of such performance/output measures will help place public libraries serving majority-minority and lower income groups on a more equal footing with those libraries serving more traditional markets, helping ensure the public libraries role as a facility for adult lifelong education.

2. Describe the goals and objectives of your project and the extent to which you have accomplished them.

This FIS project was successful in realizing most of its goal and objectives as described in the original project proposal. The actual accomplishments resulting from meeting the goal and objectives are covered in the following two sections. Therefore, this section of the report will simply provide a list of what this research project hoped to accomplish. Unless other noted, the goal and objectives of the FIS project were completely met. Any major modifications or shortcomings relative to the originally stated goals and objectives are discussed below.

Goal #1: The project goal is to research, demonstrate, and validate the use of marketing principles and new information technologies (e.g., portable data collecting instruments, geographic information systems) by public librarians in assisting them to inventory, analyze, and evaluate the adult lifelong learning needs for their particular library market.

This project utilized public libraries whose market areas were majority minority and lower income populations. However, the conclusions and results are generalizable to all libraries.

Under this one overall guiding goal of this project, there were several objectives as listed below.

Objective 1: Identify U.S. majority-minority and low-income public library jurisdictions.

Objective 2: Identify effective public library services that are most effective in these markets.

Objective 3: Design performance measures for evaluating use in these library markets, and pre-test.

Objective 4: Collect baseline data using the developed performance measures.

Objective 5: Create an instructional manual for librarians on how to use GIS for analyzing and evaluating the effectiveness of their public library services to adult learners.

Objective 6: Distribute the manual to state library agencies and public libraries serving the top 100 majority-minority or low income jurisdictions by month 27.

Objective 7: Identify state library agencies and public libraries that plan to utilize the

manual and how they plan to utilize it.

Objectives 5 through 7 were not completed as described in the grant proposal. The original intent of these objectives was to introduce geographic information system (GIS) software into the field sites by demonstrating the utility of GIS for library management to the library directors using their own local data. The long-term goal was to begin promoting GIS usage in library systems that would probably benefit the most from using GIS (e.g., those serving majority-minority and and low income jurisdictions).

There were three primary reasons for altering these objectives. First, it became obvious during our visits to the field sites that these GIS objectives were not in line with the objectives of the librarians as well as oftentimes the library directors. For example, many did not readily conceive the relationship between the GIS and the portable data collector technology. The amount of time required to explain the scope of the original overall project and the questions we received, even with an on-site visit, convinced us that the GIS objectives would be extremely difficult to realize without a personal on-site visit to all 100 library jurisdictions, an obviously impossible task. To accomplish this task would require, as a minimum, a better background in marketing research among many of the public librarians we met.

Secondly, perhaps partly as a result of the first reason, the majority of the public library systems were not able to provide some of the most critical local data for analysis in a GIS environment (e.g., address data of library users). This was not true of some of the pre-test sites. Without the availability of such data, our ability to demonstrate the utility of GIS for library management was therefore limited as well as the value of an instructional manual for librarians on using GIS.

Finally, most of the librarians participating in this research project had limited staff. Therefore, just collecting better in-library usage data was already enough of an investment of limited resources in one project. Payback for participating in the GIS aspect of this project was of lesser value.

Based upon these circumstances, the approach to meeting these three objectives was modified. Many of the objections to participation in this portion of the research project were by librarians who were unfamiliar with the value of better understanding the approximate market area being served by a library outlet. It was determined that education of librarians and library directors to the value of marketing was a prerequisite to the completion of some of the original objectives of this US Department of Education grant.

Consequently, in April of 1998, the research team applied to the Institute of Museum and Library Services for a National Leadership Grant, which we have subsequently received. The grant began in December of 1998 and will be completed by

December of 2000. The grant will develop and implement a marketing research continuing education course for librarians. The course, which will be pre-tested nationwide, will train librarians on the need for systematic collection and analysis of the more difficult-to-collect library data and how those data can be used to improve library services. The PDC technology developed by this grant proposal as well as GIS technology will be an integral part of this course.

After the development of this course, we intend to make the course available upon request at state library directors' conferences as well as at regional, national, and international library conferences. Our costs for teaching this course will be minimal in order to ensure wide dissemination and participation in the course. The course materials will also be made available over the Internet at no charge.

In our professional judgement, this alternative course of action has a much better chance for making a long-term difference than trying to adhere to the objectives in the original proposal

Objective 8: Analyze all baseline data collected by all participating libraries, making it usable for comparison by other libraries serving similar markets.

3. Describe the issues and findings emerging from your current work.

The research sponsored by this Department of Education, Field Initiated Studies grant identified and documented serious issues relative to the use of public libraries as adult lifelong learning centers serving primarily minority and low income populations. The issues and findings can be grouped into the following broad categories. Following each issue and finding is the research team's recommendation on ways to help resolve the issue.

Issue #1: Library use often differs in low-income, majority minority markets and currently all types of use is not documented.

Available research indicates that the types of public library services actually offered as well as those potentially needed in majority-minority and low-income areas differ from traditional library markets. A traditional library market is comprised of high education and income individuals. Majority-minority areas are neighborhoods where the majority of the residents are classified by the U.S. Census Bureau as belonging to a designated minority population such as, Asian Pacific, Hispanic, or Black.

Koontz (1993) found that minorities, unlike traditional library users, used reference services and attended library programs more often than they checked out books. While circulation in majority minority markets tended to rise when education and income levels rose, the differences between majority-minority markets and traditional markets remained. This project documented many types of library use that is currently not documented in any systematic fashion (e.g., resume writing, literacy programs). Within each public library market, the actual and potential demand for all types of library products and library usage must be known if libraries are to optimally serve as locations for adult lifelong education.

RECOMMENDATION: All public library systems should begin collecting data on all types of library usage at the outlet level. This effort should be coordinated by the Federal - State Cooperative System (FSCS) in order to standardize data collection on a nationwide level. The FSCS is part of the National Center for Educational Statistics, US Department of Education.

Issue #2: Traditional counts of book circulation do not capture the full use made of libraries in low income and majority minority markets

Book circulation is long the library fields largest and tried and true measure of library use. If a library facility's circulation counts are low, often it appears overall use is low. Yet populations that use the library in ways that are not currently counted could benefit from such additional counts (such as in-library use of materials) in order to better understand how the library could better serve them and their community. If funders are

not aware of the overall use and only have book circulation as a statistic of use, such a facility could be underfunded or closed.

Just as retailers such as McDonald's, would not think of only counting the hamburgers sold through the drive-through, and eliminate counting the hamburgers eaten in the restaurant in order to tabulate sales figures, neither can the public library only count book circulation, and not count actual in-library use of materials, librarian assistance, and actual user activity in the library.

This project has demonstrated a national award-winning methodology and technology that could easily be modified to collect most types of in-library use data. The methodology has been proven to be adaptable to public library systems of all types and sizes during this project.

RECOMMENDATION: Efforts should begin immediate to adapt and modify, as needed, the technology and methodology demonstrated by this project into a software application capable of collecting the diversity of all types of library usage, including those usages relate to adult lifelong education. The software application could potentially be incorporated into existing library automation products of several vendors.

Issue #3: Library use must be counted at the outlet (branch) level in order to identify how individual neighborhoods and communities use the library

Another major problem in the public library field is there is usually not a profile of library use data at the outlet level. If it is collected at the outlet level, the use figures are oftentimes merged into a system wide total. This procedure obviates any profile of use at the outlet level, further undermining distinctions between communities and how library use may differ. These distinctions between communities are critical to designing adult lifelong education programs that meet the needs of the local population rather than some non-existent "average user" or population.

For example, among the libraries in which at least 100 questions were asked of librarians by users:

3) business or financial questions ranged from zero percent of questions to a high of 7.4 percent.
4) computer usage questions ranged from a low of under one percent to a high of over 46%. One of the busiest libraries in this study that answered over 2000 user questions during its sampling periods recorded 42% of its questions as computer usage related.
5) employment and job-related questions ranged from a low of zero percent of questions to a high of 8.7 percent.

These are only a few of the many findings of this study. There are clearly major differences in the ways the local residents are using their library just among the libraries participating in this project, all of which serve majority-minority or lower income markets. There would undoubtedly be even more striking differences if the complete universe of library outlets were considered. Yet all of these distinctions among the different outlets would be lost if usage data were aggregated to a library system level. These distinctions must be acknowledged and considered if public library outlets are to maximize their potential to be adult lifelong education outlets.

RECOMMENDATION: Library data should be collected and reported at the outlet level. As a minimum, the details of the Public Library Data Service (PLDS) report for library systems should be available for each individual library outlet as well as in the FSCS report, which reports much less library data but the data is often available at the individual outlet level of detail.

Issue #4: Changing socioeconomic and demographic characteristics are parallel to changing information wants and needs

Further, it is critical to establish new library use counts at the outlet level because neighborhoods across America are increasingly changing from majority-white markets to majority-minority or more multi-cultural diverse markets. Serving different minority groups using a single program is not effective because different groups have disparate socioeconomic profiles which often parallel differing information wants and needs. For public libraries in these changing market, new measures of use are of utmost relevance.

For example, among the libraries in this study:

1) genealogy research was almost six times higher in libraries serving Native Americans than in libraries as a whole.
2) library programs as a whole were much less popular in libraries serving Asian-Americans than libraries serving other minority and ethnic groups.
3) resume writing occurred primarily in libraries serving African-Americans.
4) schoolwork activities occurred more often in libraries serving African-Americans than in the other minority and ethnic groups
5) the use of library as "place" (e.g., as a social gathering place) was more prevalent in libraries serving Asian-Americans than in the other groups.
6) attendance at library programs and the use of audio/visual equipment and phones were the highest within libraries serving lower income populations.

It is apparent that there is no such thing as "one library program effectively serves all populations." The unique needs of the population being served must be considered.

RECOMMENDATION: As with the previous issue, it is important that library

data be collected and reported at the outlet level. This data collection needs to take place in conjunction with a knowledge of the often rapidly-changing socio-economic and demographic environment surrounding the library outlet.

Issue #5: The public library is by default the premiere agency diminishing the information gap between the technical elite and the technical poor as well as between the haves and the have-nots.

While 10 percent of America's 16,000 public library outlets serve populations of 50,000 or more, nearly half serve fewer than 5,000. The public library facilities in the rural and small densely populated urban neighborhoods are often the only facility truly open to the public, and located within the travel distance of the vulnerable elements of society such as the poor, children, the elderly and other disadvantaged. The constancy of poverty and joblessness in the U.S. also increases the significance of the public library's role in adult lifelong learning in majority-minority and low-income communities, as well as in diminishing the information gap between the technical elite and the technical poor. The value of these library facilities with trained personnel as the most effective conduit for adult lifelong learning under these situations can not be underestimated.

Substantive evidence from this study that supports the use of the public library by low income groups for adult lifelong education and for obtaining access to resources they may not have at home include:

1) libraries serving low income populations had the highest percentage of questions concerning computer usage as compared to the libraries participating in this study that served racial or ethnic groups.
2) libraries serving low income populations had the highest percentage of questions on local community information as compared to the libraries participating in this study that served racial or ethnic groups.
3) with the exception of the Native American ethnic group, which is also often a low income ethnic group, the public libraries serving low income populations had a higher observed incidence of adults reading to a child than any other groups in this study.
4) as already noted, libraries serving low income groups have the highest percentage of library users that utilize the phone and the audiovisual equipment within the library.
5) libraries serving lower income populations have the second highest observed incidences of library users using the computer.

These findings show that low income groups utilize their public libraries in ways that will potentially help them or their children improve their socioeconomic status or that allow them access to resources most likely unavailable in their own homes.

A recent article by Jue, et. al. (1999) discussed the ability of public libraries nationwide to provide technology access to individuals in poverty. The article included a list of several research and policy issues that needed further investigation if public libraries are to truly become on-ramps to the information highway for individuals in poverty.

RECOMMENDATION: Everyone agrees that public libraries have a major, if not primary, role to play in providing technological access to individuals that may not have the financial resources to obtain that access at home. What is less certain is the best way to provide that access. How should the federal government help ensure such access? The article by Jue, et. al. (1999) provides a baseline assessment and discussion on the best public library funding and development policies to help individuals residing in poverty areas. Local, state, and federal agencies need to seriously address the public library and poverty issues raised in that article to ensure that funds are being spent efficiently and equitably in providing technology access to individuals living in poverty areas.

Issue # 6: Access is not really equitable at this time for all people to public libraries as the distance different people will or can actually travel to a facility is different.

While this issue may seem peripheral, it is actually central. Research indicates (and is corroborated by the experience of the librarians in the field) that certain groups such as juveniles, the elderly, disabled, and perhaps on one level more inclusively--those who do not have the reading or library habit--will not travel far for library service. If library branches are closed that are in lower income, or majority-minority markets, certain segments of these existing library user population may not use other libraries because those branches are not within 'stumbling' distance. Careful considerations must be made when closing library facilities because of this. Closure can actually mean no further library use to some groups and individuals, no matter how many new facilities are built, and no matter how much circulation goes up in the new library outlets.

RECOMMENDATION: Additional research is needed on factors that affect the actual market area size for individual library outlets given varying combinations of socio-economic and demographic factors. Such research will help determine the optimal placement of library outlets in any given real-world situation.

Issue #7: Internet access is becoming essential in today's technological society. The public library plays a vital role in ensuring equitable Internet access to the public and, in turn, the Internet is dramatically affecting public library use.

Federal and private initiatives are promoting public libraries as locations for providing equitable Internet access by funding software and hardware in areas of the nation that serve large portions of residents living in poverty. That public libraries are at least partially fulfilling that role is evidenced by some of this project's findings listed under Issue 5.

But the rise of the Internet is also impacting libraries themselves. Libraries are finding that the ubiquitous materials circulation count is going down but library visits (and in-library use of computers) when counted are going up. Library professionals are struggling to resolve how to count electronic use within the library and assess demand for electronic access. As library use is changing, it is becoming more important than ever to count all uses of the library by its many users.

RECOMMENDATION: It is becoming even more imperative to develop an easy-to-measure but meaningful method of measuring electronic usage, including Internet usage, in public libraries. Within the next few years, electronic usage in some libraries may well surpass the physical checking out of library materials. There are already several national and international groups trying to coordinate some aspects of the development of a standardized electronic usage measure within libraries. Such efforts should be applauded, encouraged, and supported by all librarians.

Issue #8: Lack of outlet level data of all use can cause vulnerable libraries to close, disproportionately reducing information access

Due to budgetary constraints, many public library systems today are merging, re-siting or closing public library branches. Such actions are being performed with little or no study on their possible effects on majority-minority and low-income groups. Indeed the evidence indicates that these actions disproportionately reduce access to public libraries for these groups.

Conversations with participating librarians verify this. The commitment of these librarians to participate was largely based upon a perceived urgency to substantiate the vitality of the branch in the community, i.e., a more precise profile of the use and users.

RECOMMENDATION: The collection of more detailed and comprehensive library usage statistics as described in this study will help solve the problems raised by this issue. Until such an approach to library usage statistics is adopted, Koontz (1997) has developed a list of library relocation and re-siting questions that library managers should consider before taking any such actions.

Issue # 9: Librarians often lack training in use of new data collection methodologies and technologies.

While librarians at present are not well trained in data collection methodologies or technologies, they are quick to learn, when they see the benefits. The enthusiasm and alacrity with which the librarians embraced the technologies in this project certainly underscored this. With the continued growth of public library data collection agencies such as Federal State Cooperative System, and the Public Library Association's Public Library Data Statistical Report, and the summaries of gathered data being made available annually --the benefits of data collection will also grow.

RECOMMENDATION: Continuing education courses should be developed for public librarians that are practical and that focus on data collection methodologies and techniques and how to utilize such data to better serve library users and make better library management decisions.

Summary

This study is the first nationwide snapshot of library use in non-traditional markets, providing data at the lowest non-aggregated level, a view of one room if you will, and not the whole house. This project provides a first nationwide snapshot of library use in markets subsumed by various immigrant groups. The refinement of performance/output measures will help place public libraries serving majority-minority and lower income groups on a more equal footing with those libraries serving more traditional 'high-circulation' markets. The study also emphasizes the importance of outlet level data over aggregated systemwide data, in order to more precisely identify the information wants and needs of the individual neighborhood or community served.

B. Partnerships

Librarians as Partners

The strongest partners developed in this project were with the individual librarians working in the participating libraries. They supported the project and conducted the quarterly sample. Without their commitment there would be no data, nor formation of the methodology and technology that libraries across America can adopt to better count all the current uses of the public library. The commitment of those librarians stem from two realizations: 1) that their hard and successful work could not be acknowledged through standard performance measures; and 2) the important uses within their library could finally be counted equivalently to circulation, such as high in-house use of science books by juveniles, three hours spent assisting an adult in resume writing, or use of the library as a meeting place by literacy tutor and pupil.

Librarians not in the project, who have heard about it through the grapevine, or through our presentations (see below), are also 'new' partners. The project has a grassroots feel to it, planted in solid research, developing a broad base of support through the library field.

Library Associations as Partners

The research project is widely known and circulated through conference presentations and our website, ***www.geolib.com***. During the past three years we have made dozens at presentations on a state, federal and international level, to widely different ethnic audience. The following are a list of the important presentations we have

made:

"Collecting Detailed In-Library Usage Data in US Public Libraries: the Methodology, the Results and Impacts," 3rd International Performance Measurement in Library and Information Services Conference, University of Northrumbia, Newcastle, England, August 29, 1999.

"Integrating GIS (Geographic Information System Software) into Marketing: Some practical Suggestions." 19th Annual ESRI GIS User Conference, San Diego, CA., July 1999.

"New Performance Measures for Public Libraries." Black Caucus of the American Library Association 4th Annual Conference, Las Vegas, NV., July, 1999.

"In-Library Usage in Libraries Serving Asian Americans." Chinese American Library Association, American Library Association Annual Conference, New Orleans, June 1999.

"Market-Based Performance Measures for Public Libraries Serving Lower Income and Majority Minority Markets." Second Annual Diversity Fair, American Library Association Annual Conference, New Orleans, June 1999.

"Where Minorities are the Majority: Utilizing GIS and New Technologies to Improve Performance Measures in Majority Minority Library Markets." American Library Association Annual Conference, New Orleans, June 1999.

"Library Use and Poverty: Que Pasa?" Library Services to Youth of Hispanic Heritage. The Fourth National Institute for Hispanic Library Education, University of South Florida, Tampa, Florida, March 12 - 14, 1999.

"Market-Based Adult Lifelong Learning Performance Measures for Public Libraries Serving Majority-Minority Markets: Phase Two." International Federation of Library Associations Conference '98, Amsterdam, NL, August 14-22,1998.

"GIS and Marketing in the Public Library Environment." Environmental Systems Research Institute (ESRI), 18th Annual User Conference, San Diego, CA., July 27-31, 1998.

"Where Minorities are the Majority." American Library Association Conference '98. Washington, DC, June 26-July 1, 1998.

"Market -Based Performance Measures for Public Libraries Serving Lower Income and

Majority-Minority Markets." American Association of Geographers, '98. Boston, MA., March 25-29, 1998.

"What do Public Librarians Need to Know About...Public Library Service to Minority Markets," Libraries for the Florida's Future: Technology and Access for All. October 13, 1997, State Library of Florida, Tallahassee, FL.

"Market-Based Adult Lifelong Learning Performance Measures for Public Libraries Serving Lower Income and Majority-Minority Markets." International Federation of Libraries Association '97. Copenhagen, Denmark, September 2-3, 1997.

"Hot Topic - Market-Based Adult Lifelong Learning Performance Measures for Public Libraries Serving Lower Income and Majority-Minority Markets." LITA-LAMA National Conference 1996. Pittsburgh, Pa. October 15, 1996.

Some presentations were made prior to receipt of the grant, indicating how long the researchers have been developing support for this important research. These include:

"Library Use Collection Methodology: Does One Size Fit All?" Using GIS to Determine what Type of Data to Collect in Differing Library Markets." U.S. Dept of Education National Center for Education Statistics "Learning From Each Other 1995." Arlington, Va. July 19, 1995.

"Four Case Studies Re: Effects of Race Minority Status on Library Use within Majority-Minority Library Markets Based Upon Two National Studies." Three-member panel, "Research Results for Improved Practice. Multiculturalism and the Public Libraries": Sponsored by Public Library Research and Statistics Committee. American Library Association Annual Conference 1995, Chicago, Illinois

"Utilizing Geographic Information Systems to Assess Public Library Service to Majority-Minority Markets." Carroll Baber Research Award 1991-92 Results. Library Research Round Table. American Library Association 1994 Conference. Miami.

Anticipated presentations in the coming year 2000 after the project is completed include the American Library Association Mid-Winter Conference in San Antonio, Texas; Public Library Association Conference in Charlotte, NC; and REFORMA, in Tucson, Arizona.

Library Policymakers as Partners

The project has received the support of private and public policymakers and agents influential to library and information policy. Portions of the database and map were provided to the Gates Library Foundation (GLF) to facilitate distribution of the first-year GLF funds for provision of Internet access in areas where libraries serve poverty

populations. Also a meeting is scheduled in March 2000 with the Federal State Cooperative System, which collects public library data nationally-- for discussion of inclusion of the new data elements developed by this project, and the project's results. Discussions with private vendors is also ongoing--to incorporate this project's methodologies and technologies and data elements into new library data collection software.

4. Describe the Major accomplishments of this FIS project since its inception.

Since research on the goals and objectives of this project will continue for years to come, the full impact of this project cannot be fully evaluated at this point in time. However, the following major contributions to the use of public libraries as adult lifelong learning centers can already be attributed directly to this project:

Accomplishment # 1: Development of Automated Method to Collect In-Library Use Data

There is a simple reason that most libraries do not attempt to measure in-library usage, usage that, if measured, would provide a more accurate picture of the different ways groups use the public libraries for adult lifelong education. Such usage is difficult to measure in a consistent and easy way. Attempts were made in the past, but the count of in-library use was not critical for the majority of libraries until the homogenous nature of American population began to change, and circulation alone could not be relied upon for a full measure of library use.

A major challenge of this project then was to develop a consistent, standardized, and easy to use method for collecting in-library data. The technology adopted involved handheld data collectors that would scan in bar codes representing pre-cast categories of in-library use, in the three broad categories of in-library material use, librarian assistance, and observed library uses.

Evidence that this developed methodology is successful and can be cited as a major accomplishment include:

1) The vast majority of public librarians that originally agreed to participate in this study were able to successfully complete their data collection using this methodology. It should be kept in mind that these libraries span the complete range of public library systems, from very rural to extremely urban, and that many of the public library outlets collecting the data were oftentimes the very outlets that were already understaffed and underfunded.
2) The principal investigators have discussed this methodology at several library conferences over the past three years with other librarians, including special and academic librarians. The librarians were enthusiastic about adopting a similar methodology in their own libraries to better measure their library services to their users. XX% of libraries in the study believe they will continue collecting after this year. The methodology will be implemented in special and academic libraries in the year 2000.
3) The Automatic ID News, a trade journal for bar code scanning users, wrote up the US Department of Education/Florida State University project in the

June 1999 issue as being the first of its kind to adapt industrial and commercial application technology in a manner to better serve the general public. This puts the methodology in a successful light with other vendors to induce more competitive pricing for librarians adopting such technology.

4) Dean K. Jue, the co-principal investigator for this project, was awarded the Frederick G. Kilgour Award by the Library and Information Technology Association (LITA) during the American Library Association conference in June of 1999 for his design of this "achievement[s] in developing new technological applications to improve public library service." Dr. Kilgour was the founder of the OCLC, Inc., one of the premier library automation vendor.

Accomplishment # 2: Utilization of Research Data by Policymakers

Additional accomplishments that can be cited include the use of the data products or their derivatives in developing significant or potentially significant policies. As one of the prerequisites to completing this study, a data set of all the public library outlets location relative to poverty areas was developed. This data product proved to be of extreme interest to several agencies during the term of this project. Specifically,

1) the data set was used by the American Library Association during Congressional hearings on the Telecommunications Act of 1996 to propose a library discount rate for telecommunications services.
2) the data set was used by the Gates Library Foundation (GLF) during the initial GLF start-up year to identify public library outlets nationwide that would automatically qualify for submitting an application to GLF for hardware and software support for Internet access.
3) the data set formed the basis for a detailed analysis of library market areas in an article by Jue, et. al. (1999). The research paper provided a baseline for assessing the distribution of public library outlets relative to poverty areas. It also identified a number of policy issues and research questions at a local, regional, and national level that should be addressed by researchers and policymakers if public libraries are to serve as a means for providing access to the information highway for low income populations.
4) discussions with three vendors regarding possibly incorporating the methodology into their software

Accomplishment # 3: Utilization of Research Data by Ethnic Groups

Another way to measure the impact of this project is the response of ethnic groups to this project. This project measures library use that can be generalized to specific ethnic groups (i.e., Africa Americans, Asians, Hispanic, Native Americans). Without exception,

all of these ethnic groups have applauded this study and cite the need for more studies of this type. Ethnic groups that the research teams have spoken to or will include:

1) Black Caucus of the American Library Association, July 1999
2) Chinese-American Library Association, American Library Association meeting, June 1999
3) Library Services to Youth of Hispanic Heritage, March 1999
4) local Reforma meeting in San Antonio, Mid-winter meeting of the American Library Association, January 2000, invited keynote speaker

Accomplishment # 4: Utilization of Library Data to Affect Library Decisions

Ultimately, one of the primary purposes of this study is to provide more "weapons" to local librarians to affect local decisions that may affect library usage. Examples of such decisions include budget allocations, library sitings, closures, or mergers, and staffing issues. The collection of in-library use data by the libraries participating in this study provide information that may be critical in affecting decisions. The research team is already aware of several instances where the collection of the data for this project have made a very significant difference. These instances are discussed in the next section. It is anticipated that there will be many more times that the data collected through this project will make a difference in improving local access to public libraries over the next few years. The research team is encouraging participants to document successes and report these to us.

5. Write one or two vignettes that highlight important results of your FIS project in a one-paragraph, story-telling manner.

The real highlight of our project was the fact that so many librarians conducted the time-consuming data collection in order to substantiate the vitality of their libraries within their communities--despite the fact there is lower circulation of materials.

That the continued collection of in-library use data WILL have an impact on library user services is already documented by our study after just one year. The following table shows the actions that the libraries in our study have already sought as a result of the data they have gathered for this study:

General Budget Increases	9 libraries (2 pending)
Additional Staff	6 libraries
Materials Budget Increase	7 libraries
Technology Budget Increase	9 libraries
Increased Programming	14 libraries
Increased Outreach Activity	18 libraries
Building Renovation/Expansion	6 libraries
New Building	2 libraries

Other actions that do not fall neatly into the above categories include increasing part-time hours, change of buying habits, and a collection management reviews.

Thus, a minimum of 20% of the library outlets in this study are already taking concrete steps to improve their library services after just one year of baseline data collection! That number would increase over time as trend analyses would identify other actions that should be taken to improve library services. These results clearly demonstrate the critical significance of measuring ALL types of library use, not just materials circulation, in designing library services that better meet the needs of the local community being served by each library outlet.

To fulfill the request for vignettes we offer these three:

1) A library professor in Texas, "...the data is key in convincing community leaders and policymakers...in a city where demographics reflect 60% Hispanic and 11% African American, that library funding models must change, ...(as well as) services and collections must change to meet the needs of different non-white

clientele." This professor is proactively working with local government officials, utilizing the data to affect such change;

2) A mid western library system became involved in the study in order to better understand the differences in branch use patterns. The collection of in-library use of materials as well as the circulation offered a much more precise picture of branch use, noting with surprise that one branch, "...had both high circulation and high in-library use." This library will continue to collect the in-library use because, "...of the ongoing insights they will provide us."

3) A small rural system is utilizing the data collected to persuade state funders that "libraries are increasingly becoming training grounds for retooling America with computer skills just as technical schools and community colleges have been." The regional library director is asking for continued analysis for continuing this campaign. Data talks!

6. Include an annotated bibliography of key products developed under the grant and where they may be obtained.

All of the key products developed under the grant will be accessible on the web at the URL **http://www.geolib.org.** Specifically, the web page already contains:

1) in-library use tracking forms available for downloading
2) instruction manual for portable data collector (PDC) used during this study

In addition, we are in the process of making all of the data collected by all of the libraries available on the same web page as well. The library data will be classified by location (e.g., rural, suburban) as well as by type(s) of ethnic and/or low income groups served but the actual library will not be part of the data set. This will allow other library researchers to utilize and analyze the collected data in other ways that may be of interest to them or other researchers.

Appendix 1 contains an example of a sample annual report that the research team sent to all participating libraries during August of 1999. The report summarized the data collected by each library and compared their results with that of other libraries in the study. It is the researchers hope to develop a program during the next few months that will allow libraries to develop such reports directly on the Internet for themselves.

APPENDIX 1